



VP3300/VP3300C/VP3300E User Manual



CE FC

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ID TECH
10721 Walker Street
Cypress, CA 90630
USA

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FCC Regulatory Compliance

This device complies with Part 15 of the FCC Rules:


1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation of the device.

Notices: Class B Equipment

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. This device complies with part 15 of the FCC rules. Operation is subject to two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Changes or modifications to the VP3300, VP3300C, or VP3300E not expressly approved by ID TECH could void the user's authority to operate the device.

Cautions and Warnings

	<p>Warning: Avoid close proximity to radio transmitters, which may reduce the capabilities of the reader.</p>
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Introduction

VP3300 is ID TECH's family of ultra-compact, EMV L1/L2-certified contactless card readers, designed for low cost, high reliability, and maximum compatibility with existing contactless payment technologies (including Apple Pay, Android Pay, and Samsung Pay).

The VP3300 family includes models with and without contact-EMV capability, as well as with and without magnetic swipe reader (MSR) functionality. (See the chart shown further below.) The economical VP3300C, which offers contactless-transaction capability *without* contact-EMV or MSR, provides an extremely cost-effective way for merchants to add tap-and-go capability to existing payment options, without the need to replace other hardware. Likewise, for merchants who already have MSR capability but need to add contact-EMV and NFC, the VP3300E offers an economical way to do so.

The VP3300 series incorporates the proven EMV L2 kernel of ID TECH's popular UniPay III card reader. Developers can integrate VP3300-series products into EMV-ready terminal systems with minimal effort using ID TECH's Universal SDK, available for Windows, Android, or iOS.

Major Features of VP3300 Family

- Micro-USB port for communications and power.
- Magnetic stripe support (VP3300 only): ISO 7810/ISO 7811, Hi-Co+Lo-Co Magnetic, JIS1/JIS2.
- MSR (VP3300 only) is bidirectional, reading up to 3 tracks of data at once.
- ICC support (VP3300 and VP3300E): EMV Level 1 and EMV L2 approvals. All L1 & L2 on the device.
- Contactless transaction support via Near Field Communication (NFC): all models.
- LED status indicator.
- Audio feedback.
- Field upgradable firmware.
- Standby mode for low power consumption.
- Compact and ergonomic design to integrate with a variety of devices.
- Available with a sturdy stand, for tabletop use.
- TDES and AES 128 encryption support.
- DUKPT key management.
- Software Development Kits for Windows, Android, iOS.
- One-year manufacturer's warranty.

Feature	VP3300	VP3300C	VP3300E
Contactless reader (NFC capability)	✓	✓	✓
ICC reader with landing contacts and EMV L1 and L2 certification	✓		✓
3-track MSR (magstripe reading)	✓		
EMVCo Contactless L1 and major card brand contactless certifications (L2's)	✓	✓	✓
Compact Size	✓	✓	✓

4 green LEDs for the contactless indication	✓	✓	✓
Audio feedback to signal good/bad card reads, etc.	✓	✓	✓
TDES and AES encryption algorithms	✓	✓	✓
Supports ID TECH standard TR31 (and optional TR34) Remote Key Injection	✓	✓	✓
Supports multiple key slots	✓	✓	✓
RoHS and REACH compliant	✓	✓	✓
1 year manufacturer warranty	✓	✓	✓

Magnetic Stripe Features (VP3300 only)

- ISO 7810 / ISO 7811
- AAMVA format
- JIS I / II
- Single / Dual / Triple Track Support
- Bi-directional reading
- Samsung Pay MST

ICC Contact Card Features (VP3300, VP3300E)

- EMVCo Contact Level 1 & 2 compliant.

Contactless (NFC) Features:

- ISO 14443 Type A&B
- ISO 18092 (P2P)
- MasterCard® MCL (Formerly PayPass)
- Visa payWave/VCPS
- Visa IRWIN
- Discover® DPAS
- American Express® ExpressPay
- MIFARE
- Apple Pay
- Apple VAS Loyalty
- Samsung Pay NFC & MST
- Android Pay
- Google SmartTap Loyalty

Before You Start Using VP3300 products

Devices in the VP3300 family are compact micro-USB devices for handling contactless transactions. (See chart above for differences between models.) Your VP3300-series device is designed to operate in conjunction with certified third party payment software and compatible hosts, such as USB-equipped tablets, PCs, and smartphones. Before you connect VP3300 to the host, install and activate the software application service according to the instructions provided by your payment application service or software provider, then connect the VP3300 to the host through a micro-USB cable (not included).

LED Status and Audible Beeper During Transactions and Operation

Device Status	4 LED's	Audible Beeper
Run Mode	Left LED Flash 300ms on/5s off	
Contactless Read Successful	All 4 LEDs flash Once	1 longer beep
Contactless Read Failed		2 short beeps
ICC is being Processed	Left LED flashes: 500ms on/off, DO NOT remove card	
Magnetic Stripe Read Successful	All 4 LEDs flash Once	1 longer beep
Magnetic Stripe Read Failed		2 short beeps

Physical Specifications (VP3300, VP3300C, VP3300E)

No.	Item	Specification
1	Physical Dimensions	64mm x 49mm x 14.5mm(LxWxH)
2	Structure Material	Plastic, PC UL 94V-0
4	Texture	MT11010
5	Weight	50g

Operation and Storage Environment

Item	Specification	Note
Operating Temperature	0 °C to 55 °C	1. Non-condensing. 2. Product operation temperature is limited to the range for the reason of the constraint of Li-Battery specification.
Storage Temperature	-20 °C to 60 °C	1. Non-condensing. 2. Product storage temperature is limited to the range for the reason of the constraint of Li-Battery specification.
Operating Humidity	5% to 95%	Non-condensing
Storage Humidity	5% to 95%	Non-condensing

Other Agency Approvals and Compliances

- CE (EN55022/EN55024, Class- B)
- FCC (Part 15, Class-B)
- RoHS (DIRECTIVE 2011/65/EU)
- REACH
- EMV Contact L1&L2
- EMV Contactless L1

For Software Developers: Software Development Support

VP3300 devices are designed to be compatible with a wide range of third party payment applications. ID TECH offers a Universal SDK (available for iOS, Android, or Windows) to enable rapid application development with any model of VP3300 as the target device. The languages supported include Objective C (on iOS), Java (on Android), and C# (on Windows). The Universal SDK includes rich, powerful libraries that make communication with VP3300 comparatively easy while greatly facilitating debugging.

Normally, development of applications that take advantage of VP3300 capabilities can be done in a high-level language like Java or C# (using convenience objects and data structures), obviating the need to send hex-code commands directly via USB-HID.

Nevertheless, if you need to communicate with the device via audio jack or via USB-HID, it is possible to do so. For a command reference for VP3300-series products, consult the *NEO Interface Developers Guide* (IDG), P/N 80139403-001.

Demo App

The Universal SDK comes with a rich, fully featured demo app. Complete source code for the demo app is included with the SDK.

To use the demo app: On Windows, plug your VP3300-series device into the host using a USB-to-micro-USB cable (not included), then double-click the *UniversalSDKDemo.exe* file and allow a few seconds for the main window to appear (see illustration below).

The Demo App displays available commands in a command tree, as shown above. Single-click on a command to populate the center panel of the window with optional settings relevant to the command (e.g., "Amount" and "Start EMV Additional Tags" above). In some cases, text fields will appear, allowing you to enter custom values. When you are ready to execute the command in question, double-click it in the command tree. The command executes in real time and a data trace appears automatically in the center and/or right-hand panels. (Use the Clear Logs button to clear both panels.)

Revision History

Revision	Date	Description of Changes	By
A	9/15/2016	Initial release	KT
B	12/12/2016	-Removed all mentions of a battery -Some layout edits	G.Wu
C	8/16/2017	Update product name	KT